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ABSTRACT

In evaluating its first year of the Student Progress Plan (SPP), the District of Columbia Public Schools found that more students were promoted under SPP than would have been promoted under the traditional policy. Implemented in grades 1-3 in 125 schools as part of the school district's competency-based curriculum, SPP is a skills mastery plan in which promotions or retentions are decided at the end of each semester instead of the end of each year, based on reading and mathematics scores on the California Test of Basic Skills. Students who master one skill but not the other are placed in transitional classes in the skill not yet mastered. The report compares rates of promotion by student educational need (indicated by Title I status under the Elementary and Secondary Education Act), reading and math achievement level, sex, and participation in Operation Rescue, a volunteer tutorial program. Results of the evaluation show that a higher proportion of all students and of Title I students were promoted at the end of the second semester than at the end of the first, and that more girls than boys were promoted. A final chapter reviews the research literature on sex differences in academic achievement. (Author/RW)

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THE STUDENT PROGRESS PLAN (SPP) IMPLEMENTATION: GRADES ONE - THREE

FINAL EVALUATION REPORT
(School Year 1980 - 81)

EA 014 188

FLORETTA D. MCKENZIE
SUPERINTENDENT OF SCHOOLS
OCTOBER 1981

District of Columbia Public Schools

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THE STUDENT PROGRESS PLAN (SPP)
IMPLEMENTATION: GRADES ONE-THREE

SUMMARY

The Program

The Student Progress Plan (SPP) is a "skills mastery plan" which provides for semester promotions. Student success is based on mastery of skills and the acquisition of competencies specified in the District of Columbia Public Schools' Competency-Based Curriculum (CBC).

The goal of SPP is to assure that students achieve satisfactory levels of academic competence before being assigned to a higher grade level.

SPP was implemented in September 1980 in the primary grades (1-3), in a total of 125 schools. Promotions and retentions occurred in January 1981 (end of the first semester) and again in June 1981 (end of the second semester).

The Results: Student Promotions and Retentions

- At the end of the first semester, forty-seven percent of the students were promoted to the next higher SPP grade level. At the end of the second semester the percentage of promotions increased to sixty percent of the students.
- Thirty-two percent of the students were retained in the same grade at the end of the first semester, however, in June only sixteen percent of the students were retained.
- Twenty-one percent of the students deficient in either reading or mathematics at the end of the first semester and twenty-four percent at the end of the second semester were placed in transitional classes.
- At the end of each semester a significantly greater proportion of girls than boys was promoted and a significantly greater proportion of boys than girls was retained. This phenomenon is consistent with research findings and thus, is not unique to SPP.
- From January to June there was a significant decrease in the retentions of Title I students and an increase in the number of Title I students promoted.

Findings: Student Achievement and Promotion

- Students who were promoted consistently earned significantly higher scores in reading and mathematics than those who were not promoted.

- Students who were placed in transitional classes earned higher mathematics and reading scores than students who were retained.

- Girls who were promoted tended to obtain slightly higher average scores in reading and mathematics than boys who were promoted, and girls who were retained tended to obtain slightly higher average scores than boys who were retained. This is consistent with other research findings.

- Non-Title I students who were promoted consistently earned higher average scores in reading and mathematics than Title I students who were promoted.

- In general, students who did not master specific skills in reading and mathematics during the first semester but who were enrolled in Operaton Rescue schools obtained higher scores in reading and mathematics than students enrolled in non-Operation Rescue schools.

CHAPTER I

INTRODUCTION

The Student Progress Plan (SPP) is an integral part of the Competency-Based Curriculum (CBC), dealing with grade placement and promotion. CBC was designed to help children succeed in school through a skills mastery instructional program which takes into account individual differences in learning style and rate of growth. CBC was introduced in the District of Columbia Public Schools in 1976 and fully implemented throughout the system in September 1979. The Student Progress Plan was implemented in the primary grades in September 1980. In accordance with the philosophy of CBC, the goal of SPP is to eliminate automatic promotion by requiring mastery of specific skills before students are assigned to a higher grade level. The SPP plan divides each traditional grade 1-6 into two grade levels designated, A and B, to indicate a two-semester organization within the school year.

According to SPP, students are promoted at the end of each semester if they have mastered the required skills for their grade level in both reading and mathematics. Students who have mastered the required skills in only one of these areas are placed in either transitional reading deficiency classes or transitional mathematics deficiency classes. Students who fail to master the objectives for their grade level in both reading and mathematics are retained.

The first semester of school year 1980-81 ended January 29, 1981. At that time, teachers indicated student placement for the second semester. The results of the first semester statistics were presented in an interim report "The Student Progress Plan (SPP) Implementation: Grades One-Three", dated May 1981. Copies of the interim report are available in the Division of Quality Assurance upon request.

The second semester of school year 1980-81 ended June 19, 1981. Teachers of primary grades submitted data indicating promotions, retentions and September 1981 placement for all students in their classes.

In order to fully understand the 1980-81 results presented in this report, one must understand the Student Progress Plan's grade level and instructional level designations and the difference between the two concepts. The grade placement and the instructional level of students in reading and mathematics are basic factors in the assignment of students at the end of each semester.

SPP Instructional Level Continuum for The Primary Grades
Based on Specific Reading and Mathematics Skills

1A	1B	2A	2B	3A	3B	4A

SPP Grade Level Organization Continuum for the Primary Grades

1A	1B/T	1B	2A/T	2A	2B/T	2B	3A/T	3A	3B/T	3B	4A/T	4A

Note: The "T" indicates Transition which is the grade placement for students deficient in one subject area (reading or mathematics) while on grade level in the other subject area.

Any movement along the SPP grade level organization continuum is considered a promotion, e.g., 1A to 1B/T, 1B/T to 1B, and 1B/T to 2A/T. SPP grade placement (promotion, retention, transitional class assignment) are further explained through the two examples which follow.

Example One (First Semester 9/80-1/81)

Given: (1) In September 1980, Robert was placed in grade 2A because he had been promoted from grade one (pre SPP) in June 1980.

(2) After informal assessment, the teacher found Robert's reading instructional level to be 1B and his mathematics instructional level to be 2A (on grade level).

(3) At the end of the first semester in January 1981, Robert would be retained or promoted based on his mastery of a minimum of 70% of the requisite skills (including the critical skills) at his grade level in reading and mathematics. There are many outcomes which could have occurred. Five possible outcomes are shown below based on Robert's 2A grade level in September 1980.

Possible Outcomes	Robert's Mastery of Minimum Skills in Reading and Mathematics during the Semester		Results of Skills Mastery: 1/81 Grade Placement	Results of Skills Mastery: 1/81 Instructional Levels
I	Level 1B Reading Level 2A Mathematics	Non-Mastery Non-Mastery	2A	Reading 1B Mathematics 2A
II	Level 1B Reading Level 2A Mathematics	Mastery Non-Mastery	2A	Reading 2A Mathematics 2A
III	Level 1B Reading Level 2A Mathematics	Non-Mastery Mastery	2B/T	Reading 1B Mathematics 2B
IV	Level 1B Reading Level 2A Mathematics	Mastery Mastery	2B/T	Reading 2A Mathematics 2B
V	Level 1B Reading Level 2A Reading Level 2A Mathematics	Mastery Mastery Mastery	2B	Reading 2B Mathematics 2B

The possible outcomes above are explained as follows:

- Possible outcome I - Robert did not master the requisite skills in reading or mathematics during the first semester and was retained in grade 2A in January 1981.
- Possible outcome II - Robert mastered the reading skills at instructional level 1B during the semester, thus his new reading instructional level became 2A. Robert did not master the mathematics skills. Robert's grade placement remained 2A, meaning that he was retained.
- Possible outcome III - Robert did not master the reading skills. He mastered the mathematics skills, thus his mathematics instructional

level became 2B. Robert was promoted to SPP grade 2B/T (Transitional deficient in reading) in January 1981.

- Possible outcome IV -Robert mastered both the reading (1B) and mathematics (2A) skills. He was promoted to SPP grade 2B/T (Transitional deficient in reading). As in possible outcome III Robert is now on grade level in mathematics, but still below grade level in reading.
- Possible outcome V - Robert mastered the skills for instructional level 1B in reading and was instructed at reading level 2A which he also mastered during the first semester along with level 2A in mathematics. Robert was promoted to grade 2B and his instructional levels were also 2B in each subject area.

Now let us suppose that Robert's first semester results were those exhibited in outcome number IV.

Given: (1) In January 1981, Robert was placed in grade 2B/T deficient in reading.

(2) Robert's reading instructional level was 2A (He mastered 1B during the first semester) and his mathematics instructional level was 2B (He mastered 2A during the first semester).

(3) At the end of the second semester in June 1981, Robert would be retained or promoted based on his mastery of a minimum of 70% of the requisite skills (including the critical skills) at his grade level in reading and mathematics. Again, there are many outcomes which could have occurred.

Five possible outcomes are shown below based on Robert's 2B/T grade level in January 1981:

Possible Outcomes	Robert's Mastery of Minimum Skills in Reading and Mathematics during the Semester		Results of Skills Mastery: 6/81 Grade Placement	Results of Skills Mastery: 6/81 Instructional Levels
I	Level 2A Reading Level 2B Mathematics	Non-Mastery Non-Mastery	2B/T	Reading 2A Mathematics 2B
II	Level 2A Reading Level 2B Mathematics	Mastery Non-Mastery	2B	Reading 2B Mathematics 2B
III	Level 2A Reading Level 2B Mathematics	Non-Mastery Mastery	3A/T	Reading 2A Mathematics 3A
IV	Level 2A Reading Level 2B Mathematics	Mastery Mastery	3A/T	Reading 2B Mathematics 3A
V	Level 2A Reading Level 2B Reading Level 2B Mathematics	Mastery Mastery Mastery	3A	Reading 3A Mathematics 3A

Explanations of the possible outcomes above:

- Possible outcome I - Robert failed to master the requisite skills in both reading and mathematics and was retained in grade 2B/T.
- Possible outcome II - Robert mastered the reading skills at instructional level 2A, but did not master the mathematics skills at level 2B. Robert was promoted to SPP grade 2B because he had mastered all the skills required at the 2A level in both areas.
- Possible outcome III - Robert failed to master the requisite skills in reading at the 2A instructional level. He did master the skills at level 2B in mathematics and was promoted to SPP grade 3A/T (Transitional deficient in reading).
- Possible outcome IV - Robert mastered the requisite skills in both subject areas. His grade placement is 3A/T, on grade level in mathematics but still below grade level in reading.

- Possible outcome V - Robert mastered the skills for instructional level 2A in reading and was instructed at reading level 2B which he also mastered during the first semester along with level 2B in mathematics. Robert was promoted to grade 3A and his instructional levels were also 3A in each subject area.

The 1980-81 results are presented in three parts. In Chapter II a summary of the number of student promotions and retentions the second semester by grade, sex, and Title I status is presented. The data were submitted by primary grade classroom teachers in June 1981. Similar data were submitted by teachers on the same students at the end of the first semester in January 1981.

Chapter III of this report presents an analysis of the reading and mathematics achievement of a sample of primary grade students promoted and retained the second semester under the SPP guidelines. Achievement is based on the results of the California Tests of Basic Skills administered in the spring of 1981.

Chapter IV of the report summarizes related research literature on promotion and achievement of boys and girls.

CHAPTER II
SUMMARY OF STUDENT PROMOTIONS AND RETENTIONS

A. Second Semester Promotions and Retentions

1. First grade (traditional designation) teachers reported that a total of 7,228 students were in SPP grades 1A (1,539), 1B/T (695) and 1B (4,994) during the second semester of school year 1980-81. See Table 1. At the end of the second semester:

- 977 (13.5%) of the students were retained
  - 770 in grade 1A
  - 47 in grade 1B/T
  - 160 in grade 1B
- 1,153 (16.0%) were promoted to SPP Transitional grades
  - 145 from grade 1A to 1B/T deficient in reading
  - 59 from grade 1A to 1B/T deficient in mathematics
  - 36 from grade 1A to 2A/T deficient in reading
  - 15 from grade 1A to 2A/T deficient in mathematics
  - 341 from grade 1B/T to 2A/T deficient in reading
  - 142 from grade 1B/T to 2A/T deficient in mathematics
  - 307 from grade 1B to 2A/T deficient in reading
  - 108 from grade 1B to 2A/T deficient in mathematics
- 5,098 (70.5%) were promoted to grades A or B
  - 416 from grade 1A to 1B
  - 98 from grade 1A to 2A
  - 54 from grade 1B/T to 1B
  - 111 from grade 1B/T to 2A
  - 4,419 from grade 1B to 2A

TABLE 1

September 1981 Grade Level Placement
of Students in SPP Grades 1A, 1B/T and 1B by Sex

Placement in September 1981		Placement in June 1981							
		1A		1B/T		1B		TOTAL	
LEVEL	SEX	#	%	#	%	#	%	#	%
1A	Boys	486	6.7					486	6.7
	Girls	284	3.9					284	3.9
	Total	770	10.6					770	10.6
1B/TR	Boys	91	1.3	18	0.2			109	1.5
	Girls	54	0.7	14	0.2			68	0.9
	Total	145	2.0	32	0.4			177	2.4
1B/TM	Boys	40	0.5	8	0.1			48	0.6
	Girls	19	0.3	7	0.1			26	0.4
	Total	59	0.8	15	0.2			74	1.0
1B	Boys	250	3.5	32	0.5	97	1.3	379	5.3
	Girls	166	2.3	22	0.3	63	0.9	251	3.5
	Total	416	5.8	54	0.8	160	2.2	630	8.8
2A/TR	Boys	20	0.3	200	2.9	199	2.8	427	6.0
	Girls	16	0.2	133	1.8	108	1.5	257	3.5
	Total	36	0.5	341	4.7	307	4.3	684	9.5
2A/TM	Boys	7	0.1	65	0.9	54	0.7	126	1.7
	Girls	8	0.1	77	1.1	54	0.7	139	1.9
	Total	15	0.2	142	2.0	108	1.4	265	3.6
2A	Boys	54	0.7	58	0.8	2,169	30.0	2,281	31.5
	Girls	44	0.7	53	0.7	2,250	31.2	2,347	32.6
	Total	98	1.4	111	1.5	4,419	61.2	4,628	64.1
Total	Boys	948	13.1	389	5.4	2,519	34.8	3,856	53.3
	Girls	591	8.2	306	4.2	2,475	34.3	3,372	46.7
	Total	1,539	21.3	695	9.6	4,994	69.1	7,228	100.0

A total of 6,251 (86.5%) of the first grade students were promoted to a higher SPP grade in June 1981. Assuming that the 7,228 students were placed in SPP grade 1A in September 1980, a total of 5,577 (77.2%) mastered the required skills for placement in grades 2A/T (949 students) and 2A (4,628 students) in September 1981.

2. Second grade teachers reported that a total of 6,930 students were in SPP grades 2A (1,675), 2B/T (1,365) and 2B (3,890) during the second semester of school year 1980-81. See Table 2. At the end of the second semester:

° 1,036 (14.9%) of the students were retained
  - 849 in grade 2A
  - 110 in grade 2B/T
  - 77 in grade 2B

° 1,853 (26.7%) were promoted to SPP Transitional grades
  - 258 from grade 2A to 2B/T deficient in reading
  - 79 from grade 2A to 2B/T deficient in mathematics
  - 89 from grade 2A to 3A/T deficient in reading
  - 23 from grade 2A to 3A/T deficient in mathematics
  - 807 from grade 2B/T to 3A/T deficient in reading
  - 241 from grade 2B/T to 3A/T deficient in mathematics
  - 183 from grade 2B to 3A/T deficient in reading
  - 173 from grade 2B to 3A/T deficient in mathematics

TABLE 2

September 1981 Grade Level Placement
of Students in SPP Grades 2A, 2B/T and 2B by Sex

Placement in September 1981		Placement in June 1981							
		2A		2B/T		2B		TOTAL	
LEVEL	SEX	#	%	#	%	#	%	#	%
2A	Boys	520	7.5					520	7.5
	Girls	329	4.8					329	4.8
	Total	849	12.3					849	12.3
2B/TR	Boys	158	2.3	55	0.8			213	3.1
	Girls	100	1.4	34	0.5			134	1.9
	Total	258	3.7	89	1.3			347	5.0
2B/TM	Boys	34	0.5	7	0.1			41	0.6
	Girls	45	0.7	14	0.2			59	0.9
	Total	79	1.2	21	0.3			100	1.5
2B	Boys	145	2.1	10	0.1	42	0.6	197	2.8
	Girls	133	1.9	13	0.2	35	0.5	181	2.6
	Total	278	4.0	23	0.3	77	1.1	378	5.4
3A/TR	Boys	54	0.8	484	7.0	109	1.6	647	9.4
	Girls	35	0.5	323	4.6	74	1.0	432	6.1
	Total	89	1.3	807	11.6	183	2.6	1,079	15.5
3A/TM	Boys	10	0.1	111	1.6	77	1.1	198	2.8
	Girls	13	0.2	130	1.9	96	1.4	239	3.5
	Total	23	0.3	241	3.5	173	2.5	437	6.3
3A	Boys	49	0.7	95	1.4	1,616	23.3	1,760	25.4
	Girls	50	0.7	89	1.3	1,841	26.6	1,980	28.6
	Total	99	1.4	184	2.7	3,457	49.9	3,740	54.0
Total	Boys	970	14.0	762	11.0	1,844	26.6	3,576	51.6
	Girls	705	10.2	603	8.7	2,046	29.5	3,354	48.4
	Total	1,675	24.2	1,365	19.7	3,890	56.1	6,930	100.0

° 4,041 (58.3%) were promoted to grades A or B

- 278 from grade 2A to 2B
- 99 from grade 2A to 3A
- 23 from grade 2B/T to 2B
- 184 from grade 2B/T to 3A
- 3,457 from grade 2B to 3A

A total of 5,894 (85.1%) of the second grade students were promoted to a higher SPP grade in June 1981. Assuming that all 6,930 students were placed in SPP grade 2A in September 1980, a total of 5,256 (75.8%) mastered the skills required for placement in grades 3A/T (1,516 students) and 3A (3,740 students) in September 1981.

3. Third grade teachers reported that a total of 7,127 students were in grades 3A (2,161), 3B/T (1,626) and 3B (3,340) for the second semester of school year 1980-81. See Table 3.

At the end of the second semester:

° 1,481 (20.8%) of the students were retained

- 1,305 in grade 3A
- 131 in grade 3B/T
- 45 in grade 3B

° 2,138 (30.0%) were promoted to SPP Transitional grades

- 296 from grade 3A to 3B/T deficient in reading
- 108 from grade 3A to 3B/T deficient in mathematics
- 131 from grade 3A to 4A/T deficient in reading
- 72 from grade 3A to 4A/T deficient in mathematics
- 816 from grade 3B/T to 4A/T deficient in reading
- 458 from grade 3B/T to 4A/T deficient in mathematics
- 104 from grade 3B to 4A/T deficient in reading
- 153 from grade 3B to 4A/T deficient in mathematics

TABLE 3

September 1981 Grade Level Placement
of Students in SPP Grades 3A, 3B/T and 3B by Sex

Placement in September 1981		Placement in June 1981							
		3A		3B/T		3B		TOTAL	
LEVEL	SEX	#	%	#	%	#	%	#	%
3A	Boys	800	11.2					800	11.2
	Girls	505	7.1					505	7.1
	Total	1,305	18.3					1,305	18.3
3B/TR	Boys	177	2.5	50	0.7			227	3.2
	Girls	119	1.7	52	0.7			171	2.4
	Total	296	4.2	102	1.4			398	5.6
3B/TM	Boys	55	0.8	11	0.1			66	0.9
	Girls	53	0.7	18	0.3			71	1.0
	Total	108	1.5	29	0.4			137	1.9
3B	Boys	97	1.4	16	0.2	29	0.4	142	2.0
	Girls	102	1.4	14	0.2	16	0.2	132	1.8
	Total	199	2.8	30	0.4	45	0.6	274	3.8
4A/TR	Boys	88	1.2	470	6.6	60	0.8	618	8.6
	Girls	43	0.6	346	4.9	44	0.7	433	6.2
	Total	131	1.8	816	11.5	104	1.5	1,051	14.8
4A/TM	Boys	34	0.5	199	2.8	70	1.0	303	4.3
	Girls	38	0.5	259	3.6	83	1.2	380	5.3
	Total	72	1.0	458	6.4	153	2.2	683	9.6
4A	Boys	24	0.3	90	1.3	1,361	19.1	1,475	20.7
	Girls	26	0.4	101	1.4	1,677	23.5	1,804	25.3
	Total	50	0.7	191	2.7	3,038	42.6	3,279	46.0
Total	Boys	1,275	17.9	836	11.7	1,520	21.3	3,631	50.9
	Girls	886	12.4	790	11.1	1,820	25.6	3,496	49.1
	Total	2,161	30.3	1,626	22.8	3,340	46.9	7,127	100.0

° 3,508 (49.2%) were promoted to grades A or B

- 199 from grade 3A to 3B
- 50 from grade 3A to 4A
- 30 from grade 3B/T to 3B
- 191 from grade 3B/T to 4A
- 3,038 from grade 3B to 4A

A total of 5,646 (79.2%) of the third grade students were promoted to a higher SPP grade in June 1981. Assuming that all 7,127 students were placed in SPP grade 3A in September 1980, a total of 5,013 (70.3%) mastered the skills required for placement in grades 4A/T (1,734 students) and 4A (3,279 students) in September 1981.

4. Together, the first, second and third grade teachers reported on a total of 21,285 primary students. Collectively, at the end of the second semester:

° 3,494 (16.4%) of the students were retained

- 977 in grades 1A, 1B/T and 1B
- 1,036 in grades 2A, 2B/T and 2B
- 1,481 in grades 3A, 3B/T and 3B

° 5,144 (24.2%) were promoted to SPP Transitional grades

- 1,153 from grades 1A, 1B/T and 1B to 1B/T and 2A/T
- 1,853 from grades 2A, 2B/T and 2B to 2B/T and 3A/T
- 2,138 from grades 3A, 3B/T and 3B to 3B/T and 4A/T

° 12,647 (59.4%) were promoted to grades A or B

- 5,098 from grades 1A, 1B/T and 1B to 1B and 2A
- 4,041 from grades 2A, 2B/T and 2B to 2B and 3A
- 3,508 from grades 3A, 3B/T and 3B to 3B and 4A

A total of 17,791 (83.6%) of all the primary students were promoted in June 1981 to a higher SPP grade than they were in during the second semester. Assuming that all 21,285 students were placed in SPP grades 1A, 2A and 3A in September 1980, a total of 15,846 (74.4%) mastered the skills required for placement in grades 2A/T-2A, 3A/T-3A and 4A/T-4A respectively in September 1981.

B. First and Second Semester Promotions and Retentions Compared

The primary grade teachers reported on 21,481 students at the end of the first semester (1/81) and 21,285 students at the end of the second semester (6/81), a difference of 196 students. The number of students reported within grades was also different for the two semesters. Therefore, the Comparisons in Table 4 are in percentages of students promoted and retained.

Table 4

Comparison of Students Promoted and Retained the First and Second Semesters in Percentages

September 1980 Grade Placement	Retained			Promoted to SPP Transition Grade			Promoted to Grade A or B			Total Number Students Reported	
	Sem.1	Sem.2	Diff	Sem.1	Sem.2	Diff	Sem.1	Sem.2	Diff	Sem.1	Sem.2
1A	25.3	13.5	-11.8	15.7	16.0	+ .3	59.0	70.5	+11.5	7,276	7,228
2A	31.4	14.9	-16.5	24.3	26.7	+ 2.4	44.2	58.3	+14.1	7,012	6,930
3A	38.8	20.8	-18.0	24.7	30.0	+ 5.3	36.5	49.2	+12.7	7,193	7,127
1A - 3A	31.8	16.4	-15.4	21.5	24.2	+ 2.7	46.7	59.4	+12.7	21,481	21,285

At the end of the first semester in January 1981, 31.8% of the students in SPP were retained and began the second semester of the school year in the same SPP grade. At the end of the second semester in June 1981, 16.4% of the total number of students in SPP were retained.

At the end of the first semester, 21.5% of the students were promoted to transitional classes because they were deficient in either reading or mathematics while on grade level in one of the subject areas. At the end of the second semester, 24.2% of the students were promoted to a transitional class.

At the end of the first semester, 46.7% of the students were promoted to SPP grades A or B. At the end of the second semester, 59.4% of the students were promoted to SPP grades A or B.

Even though there was a decrease in the retentions and an increase in promotions at all grade levels the second semester over the first semester, one trend continued. Retentions increased the higher the grade level, while promotions decreased the higher the grade level.

There were intensified tutorial and remedial programs implemented during the second semester. We assume that these efforts aided in reducing retentions and increasing the number of promotions.

The figures on the next two pages show the steady advancement in the reading and mathematics instructional levels of third graders from October 1980 to June 1981.

C. Promotions and Retentions of Boys and Girls

Of the 21,285 students in SPP during the second semester, 11,063 (52.0%) were boys and 10,222 (48.0%) were girls. Tables 1-3 on previous pages show the breakdown by grades.

Comparison of the proportion of boys and girls who were retained revealed significantly greater proportions of boys than girls were retained in each of the three grade levels in June 1981. The same results were evidenced at the end of the first semester, wherein 35.9% of the boys and 27.4% of the girls were retained. At the end of the second semester 19.2% of the boys and 13.4% of the girls were retained.

Figure 1

Comparison of Reading Instructional Levels for Third Graders in October 1980, February 1981 and June 1981

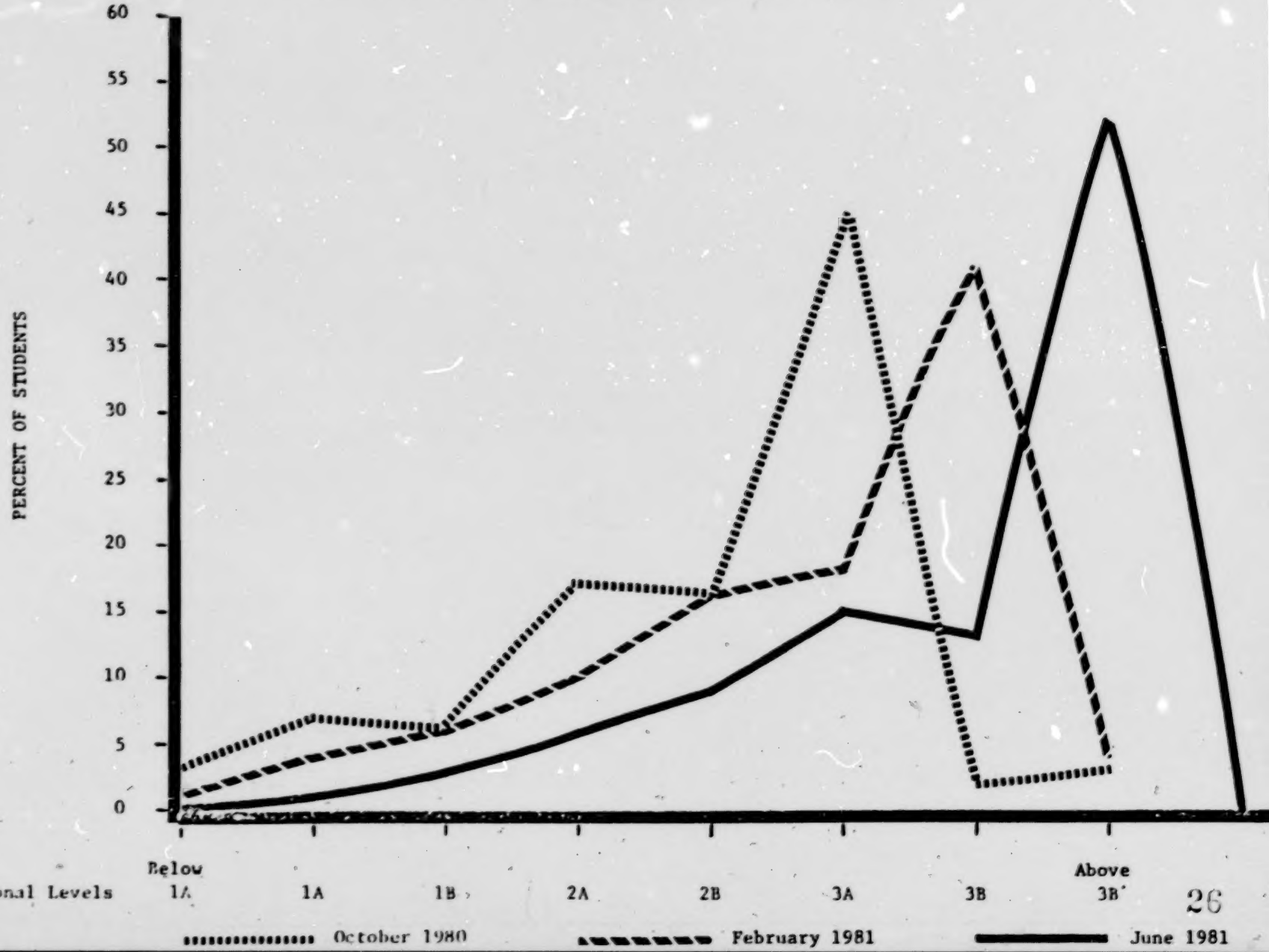
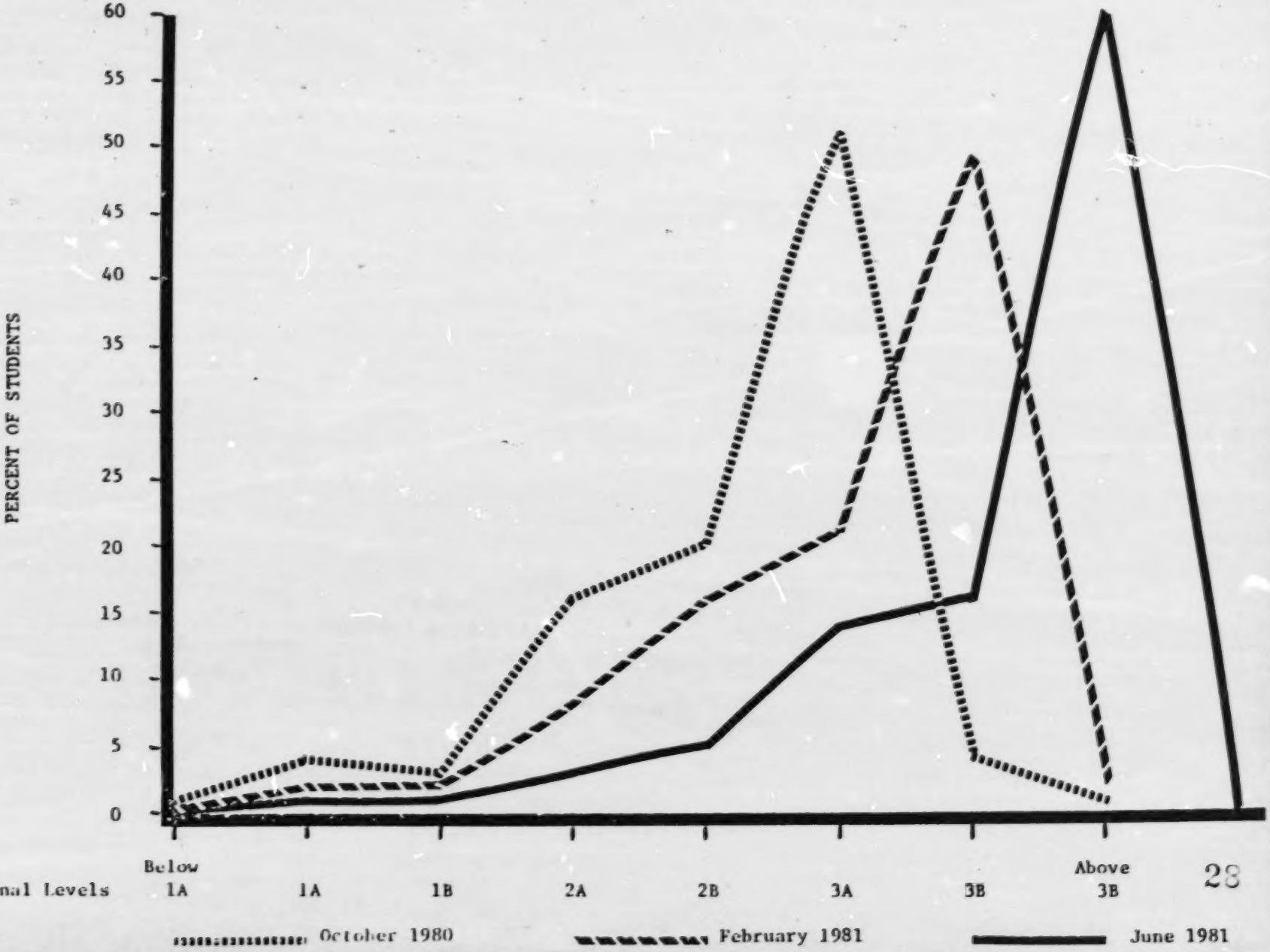


Figure 2

Comparison of Mathematics Instructional Levels for Third Graders in October 1980, February 1981, and June 1981



A significantly greater proportion of boys than girls was placed in transitional classes deficient in reading at each grade level. A greater proportion of girls than boys was placed in transitional classes deficient in mathematics at each grade, but the proportion was not significant. These results were the same as those at the end of the first semester.

The promotion statistics at the end of the first and the second semester revealed that a significantly greater proportion of girls was promoted to levels A or B within each grade even though promotions among boys and girls increased considerably the second semester in all grades. The first semester 42.0% of the boys and 51.8% of the girls were promoted to levels A or B; the second semester the percentages were 54.8% and 64.4%, respectively.

D. Promotions and Retentions of Title I and Non-Title I Students in Title I Schools

The Title I and Non-Title I promotion and retention data were taken from seventy-two schools receiving Title I services. The Title I services in those schools were provided for those students with the greatest educational needs.

A total of 14,224 students in the primary grades were reported by classroom teachers in the Title I Schools for the second semester, of which 5,339 (37.5%) received Title I services. The student breakdown by grade and Title I status is shown in the following three tables.

There was a significantly higher proportion of Title I students retained than Non-Title I students in each of the primary grades in June 1981. This was also true the first semester and can be expected since the Title I students were the most needy educationally. When the percentage of Title I students retained in all grades the first semester (50.7%) is compared to the percentage of Title I students retained in all grades the second semester (28.5%) the result is a statistically significant reduction in retentions. The second semester retentions of the Title I students was about one-half that of the first semester.

TABLE 5

September 1981 Grade Level Placement
of Students in SPP Grades 1A, 1B/T
and 1B by Title I and Non-Title I Status

Placement in September 1981		Placement in June 1981							
		1A		1B/T		1B		TOTAL	
LEVEL	Status	#	%	#	%	#	%	#	%
1A	Title I	310	6.5					310	6.5
	Non-Title I	289	6.0					289	6.0
	Total	599	12.5					599	12.5
1B/TR	Title I	34	0.7	14	0.3			48	1.0
	Non-Title I	72	1.5	9	0.2			81	1.7
	Total	106	2.2	23	0.5			129	2.7
1B/TM	Title I	19	0.4	2	0.0			21	0.4
	Non-Title I	16	0.3	3	0.1			19	0.4
	Total	35	0.7	5	0.1			40	0.8
1B	Title I	138	2.9	19	0.4	28	0.6	185	3.9
	Non-Title I	168	3.5	25	0.5	58	1.4	261	5.4
	Total	306	6.4	44	0.9	96	2.0	446	9.3
2A/TR	Title I	6	0.1	135	2.8	89	1.9	230	4.8
	Non-Title I	19	0.4	132	2.8	129	2.7	280	5.9
	Total	25	0.5	267	5.6	218	4.6	510	10.7
2A/TM	Title I	2	0.0	35	0.7	27	0.6	64	1.3
	Non-Title I	3	0.1	54	1.2	47	0.9	104	2.2
	Total	5	0.1	89	1.9	74	1.5	168	3.5
2A	Title I	10	0.2	31	0.7	690	14.4	731	15.3
	Non-Title I	56	1.2	50	1.0	2,061	43.0	2,167	45.2
	Total	66	1.4	81	1.7	2,751	57.4	2,898	60.5
Total	Title I	519	10.8	236	4.9	834	17.5	1,589	33.2
	Non-Title I	623	13.0	273	5.8	2,305	48.0	3,201	66.8
	Total	1,142	23.8	509	10.7	3,139	65.5	4,790	100.0

TABLE 6

September 1981 Grade Level Placement of Students in SIP Grades 2A, 2B/T and 2B by Title I and Non-Title I Status

Placement in September 1981		Placement in June 1981							
		2A		2B/T		2B		TOTAL	
LEVEL	Status	#	%	#	%	#	%	#	%
2A	Title I	379	8.0					379	8.0
	Non-Title I	259	5.5					259	5.5
	Total	638	13.5					638	13.5
2B/TR	Title I	115	2.5	29	0.6			144	3.1
	Non-Title I	83	1.7	31	0.7			114	2.4
	Total	198	4.2	60	1.3			258	5.5
2B/TM	Title I	26	0.5	3	0.1			29	0.6
	Non-Title I	36	0.8	14	0.3			50	1.1
	Total	62	1.3	17	0.4			79	1.7
2B	Title I	112	2.4	6	0.1	31	0.7	149	3.2
	Non-Title I	147	3.1	10	0.2	31	0.7	188	4.0
	Total	259	5.5	16	0.3	62	1.4	337	7.2
3A/TR	Title I	31	0.7	260	5.5	66	1.4	357	7.6
	Non-Title I	28	0.6	279	5.9	76	1.6	383	8.1
	Total	59	1.3	539	11.4	142	3.0	740	15.7
3A/TM	Title I	5	0.1	68	1.5	44	0.9	117	2.5
	Non-Title I	12	0.3	105	2.2	82	1.7	199	4.2
	Total	17	0.4	173	3.7	126	2.6	316	6.7
3A	Title I	32	0.6	57	1.2	394	8.4	483	10.2
	Non-Title I	64	1.4	95	2.0	1,704	36.1	1,863	39.5
	Total	96	2.0	152	3.2	2,098	44.5	2,346	49.7
Total	Title I	700	14.8	423	9.0	535	11.4	1,658	35.2
	Non-Title I	629	13.4	534	11.3	1,893	40.1	3,056	64.8
	Total	1,329	28.2	957	20.3	2,428	51.5	4,714	100.0

TABLE 7

September 1981 Grade Level Placement
of Students in SPP Grades 3A, 3B/T
and 3B by Title I and Non-Title I Status

Placement in September 1981		Placement in June 1981							
		3A		3B/T		3B		TOTAL	
LEVEL	Status	#	%	#	%	#	%	#	%
3A	Title I	661	14.0					661	14.0
	Non-Title I	356	7.6					356	7.6
	Total	1,017	21.6					1,017	21.6
3B/TR	Title I	158	3.4	40	0.8			198	4.2
	Non-Title I	78	1.6	32	0.7			110	2.3
	Total	236	5.0	72	1.5			308	6.5
3B/TM	Title I	37	0.8	6	0.1			43	0.9
	Non-Title I	44	0.9	22	0.5			66	1.4
	Total	81	1.7	28	0.6			109	2.3
3B	Title I	71	1.5	9	0.2	18	0.4	98	2.1
	Non-Title I	74	1.5	17	0.4	13	0.3	104	2.2
	Total	145	3.0	26	0.6	31	0.7	202	4.3
4A/TR	Title I	70	1.5	328	6.9	21	0.5	419	8.9
	Non-Title I	44	0.9	277	5.9	29	0.6	350	7.4
	Total	114	2.4	605	12.8	50	1.1	769	16.3
4A/TM	Title I	29	0.6	124	2.6	40	0.8	193	4.0
	Non-Title I	24	0.5	179	3.8	78	1.7	281	6.0
	Total	53	1.1	303	6.4	118	2.5	474	10.0
4A	Title I	9	0.2	37	0.8	434	9.2	480	10.2
	Non-Title I	25	0.5	93	2.0	1,243	26.3	1,361	28.8
	Total	34	0.7	130	2.8	1,677	35.5	1,841	39.0
Total	Title I	1,035	22.0	544	11.4	513	10.9	2,092	44.3
	Non-Title I	645	13.5	620	13.3	1,363	28.9	2,628	55.7
	Total	1,680	35.5	1,164	24.7	1,876	39.8	4,720	100.0

There was no significant difference in the proportion of Title I and Non-Title I students placed in transitional classes deficient in reading. This was also true of the first semester. It was noted, however, that a greater number of Title I and Non-Title I students were placed in transition classes deficient in reading the second semester.

There was no significant difference in the proportion of Title I and Non-Title I students placed in transitional classes deficient in mathematics in any of the grades in June 1981, nor was there an appreciable change in the ratio between the two semesters.

The proportion of Non-Title I students promoted to levels A or B was significantly higher than the proportion of Title I students promoted to levels A or B in each of the grades. This was also true the first semester. Again, it must be stated that the Title I students were those with the greatest educational needs. Furthermore, the percentage of Title I students promoted the second semester (38.4%) in all grades was greater than the percentage promoted in the first semester (27.4%).

The data indicate a significant decrease in the retention of Title I students and an increase in the number of Title I students promoted in June 1981.

CHAPTER III

PROMOTIONAL STATUS AND ACHIEVEMENT IN READING AND MATHEMATICS

In response to a request from the Superintendent's Office for a comparison of student achievement, promotional status, Title I status, and sex, the Division of Quality Assurance designed a study which would examine the relationships of these four characteristics. Students from twenty-six schools, which were selected at random, were included in the study. Fourteen of the schools were Title I schools; the remaining twelve were Non-Title I schools. One teacher from the first, second, and third grade levels in each of the designated schools was selected at random. The students of these selected teachers were the sample for the study. Data for approximately 600 students at each of the three grade levels were used in the study.

The promotional status, sex, and Title I status of the students were obtained from the Organizational Placement of Students Class List which was completed by classroom teachers in June 1981. Title I designation status on the Organizational Placement List indicated whether or not the student received Title I services. Achievement data in reading and mathematics for students were obtained from the Class Record Sheet, a special test report summary provided by CTB/McGraw-Hill for the Comprehensive Tests of Basic Skills (CTBS). The Comprehensive Tests of Basic Skills is a standardized achievement test which was given in the Spring to the students in the study sample. The total number of correct responses for the reading and mathematics skills tests was recorded for each student. The maximum total score varied according to grade level and subject area as seen on the following page.

Maximum Total Scores for the Comprehensive Tests of Basic Skills

Grade Level	Subject Area	
	Reading	Mathematics
1	84	56
2	74	53
3	85	98

In addition to the information which was obtained about students, schools in the Operation Rescue Program were identified. Operation Rescue is a volunteer tutorial program which was designed to provide special assistance during the semester to students who failed to master specific skills in reading and mathematics. Twelve of the twenty-six schools participating in the study were target schools for Operation Rescue. Because of recordkeeping procedures, it was not possible to determine which students received tutorial assistance as a result of Operation Rescue and those who did not. Therefore, the school participation will be used in the analyses pertaining to the Operation Rescue Program. The data which were collected regarding achievement, promotion status, Title I classification, and participation by schools in Operation Rescue provide answers to questions, presented below, which were the basis of the study.

Before the questions are answered certain definitions pertaining to this Chapter must be established.

1. SPP grade levels 1A, 1B/T, and 1B are hereafter referred to as grade level 1.
2. SPP grade levels 2A/T, 2A, 2B/T, and 2B are hereafter referred to as grade level 2.
3. SPP grade levels 3A/T, 3A, 3B/T, and 3B are hereafter referred to as grade level 3.

4. SPP grade levels 4A/T and 4A are hereafter referred to as grade level 4.

5. Any movement of students along the SPP Grade Level Organization Continuum (See Introduction, page 2) for the second semester is hereafter referred to as a SPP Promotion and any lack of movement the second semester along the continuum is hereafter referred to as a SPP Retention.

6. Movement of students who began September 1980 in grade levels 1A, 2A, and 3A and at the end of the second semester were placed in grade levels 2A, 3A, and 4A, respectively, is hereafter referred to as a Traditional Annual Promotion and any lack of movement (9/80 - 6/81) from 1A to 2A, 2A to 3A, and from 3A to 4A is hereafter referred to as a Traditional Annual Retention.

A. Relationship Between Achievement and Promotion Status

Is there a difference in the reading and mathematics performance of students promoted and retained?

The promotion/retention classifications are listed along with the number of first, second, and third grade students in the sample who were promoted or retained according to the above definitions. Note that depending upon the type of promotion or retention referred to, the number of students included in the classifications varies.

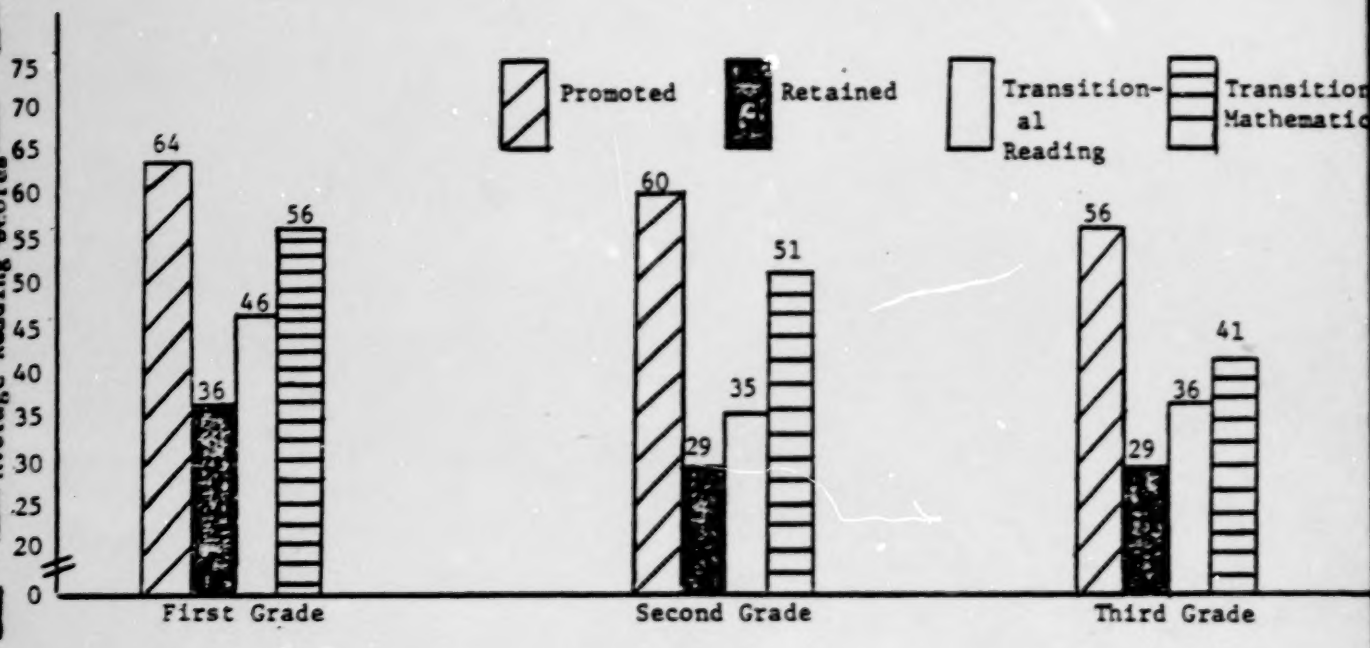
Number of First, Second, and Third Grade Students who were Promoted or Retained According to Promotion/Retention Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion/Retention	Promoted	469	269	326
	Transitional	81	191	183
	Retained	85	136	131
Traditional Annual Promotion/Retention	Promoted	421	233	308
	Retained	214	363	332

Findings. Figures 3 and 4 present comparisons of the average CTBS scores earned by first, second, and third grade students in reading and mathematics, respectively, who were promoted, retained, or placed at a transitional level.

Figure 3

Average Total Reading Scores for Students Classified According to SPP Promotion/Retention



From Figures 3 and 4, it should be noted that:

- For all three grades, students who were promoted earned average reading and mathematics scores which were higher that the average scores for students who were retained. These differences in the scores for those promoted and those retained are significant in all cases (Figures 3 and 4).

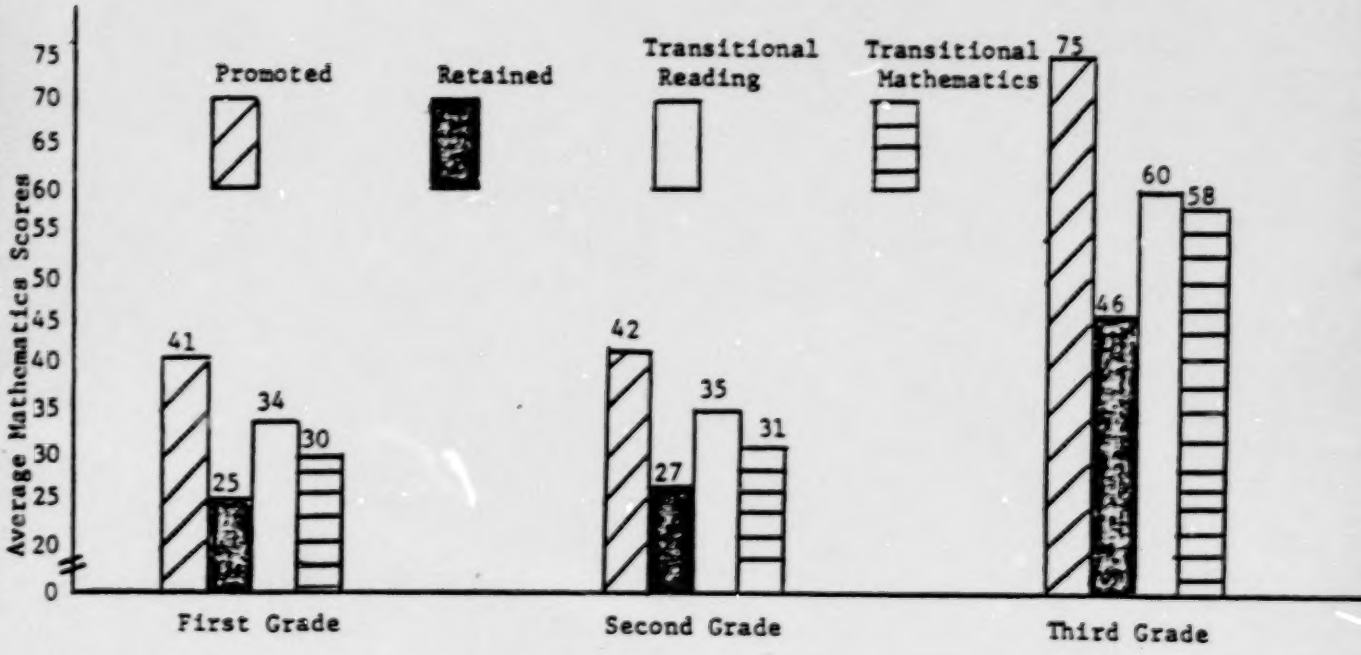
- For the reading test (Figure 3) first, second, and third grade students who were promoted to a transitional reading or mathematics class earned an average score which was higher than the average score earned by students who were retained. These differences are also statistically significant.

- For all three grades, students who were placed in a transitional mathematics class earned higher reading score than students who were placed in a transitional reading class. These differences were statistically significant, however, only at the second grade level.

- The CTBS tests are quite different in content and maximum possible score from one grade to the next, and therefore, any comparison in total scores between grades is inappropriate without additional interpretation (Figures 3 and 4).

Figure 4

Average Total Mathematics Scores for Students Classified According to SPP Promotion/Retention



- At grades two and three, students who were promoted obtained significantly higher reading scores than the transitional mathematics students.

- At all three grades, students who were promoted obtained significantly higher mathematics scores than the transitional reading students.

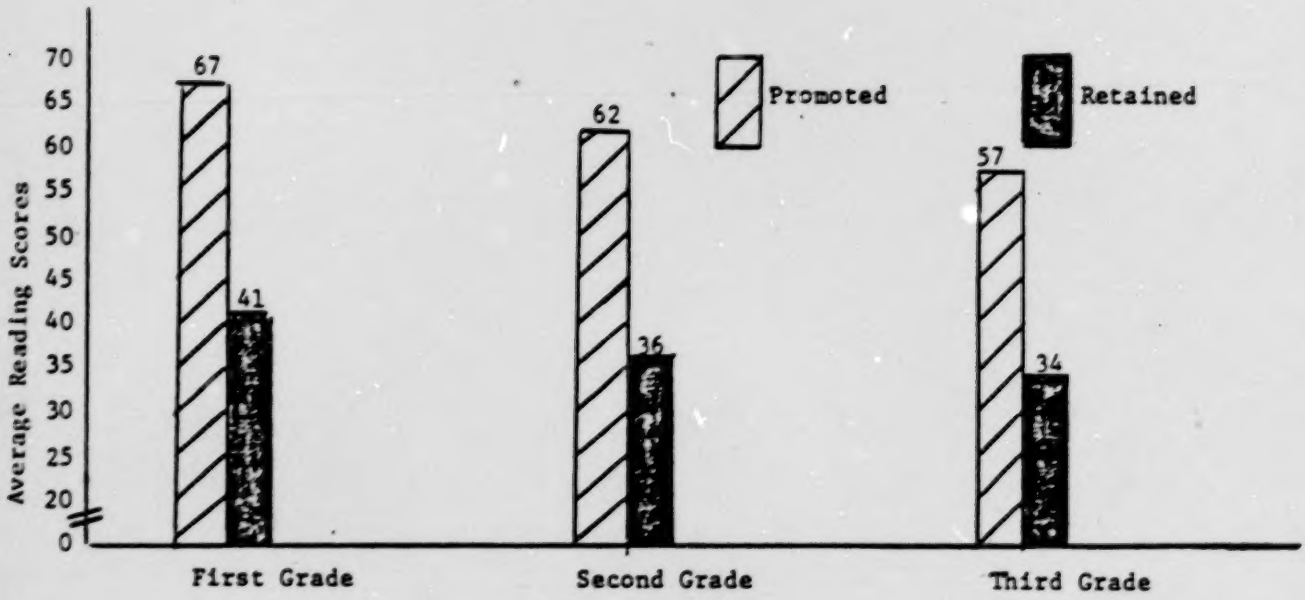
- For the mathematics test (Figure 4), first, second, and third grade students who were promoted earned average scores which were significantly higher than the average scores for students who were promoted to either a transitional reading or transitional mathematics class.

- Only the third grade students who were promoted to a transitional mathematics class earned statistically higher mathematics scores than the students who were retained (Figure 4). At the first and second grades, the differences in average mathematics scores for students who were retained were not significantly different from scores of transitional mathematics students.

Figures 5 and 6 present comparisons of the average CTBS scores in reading and mathematics, respectively, earned by first, second, and third grade students who were promoted or not promoted to a higher traditional annual grade.

Figure 5

Average Total Reading Scores for Students Classified According to Traditional Annual Promotion/Retention



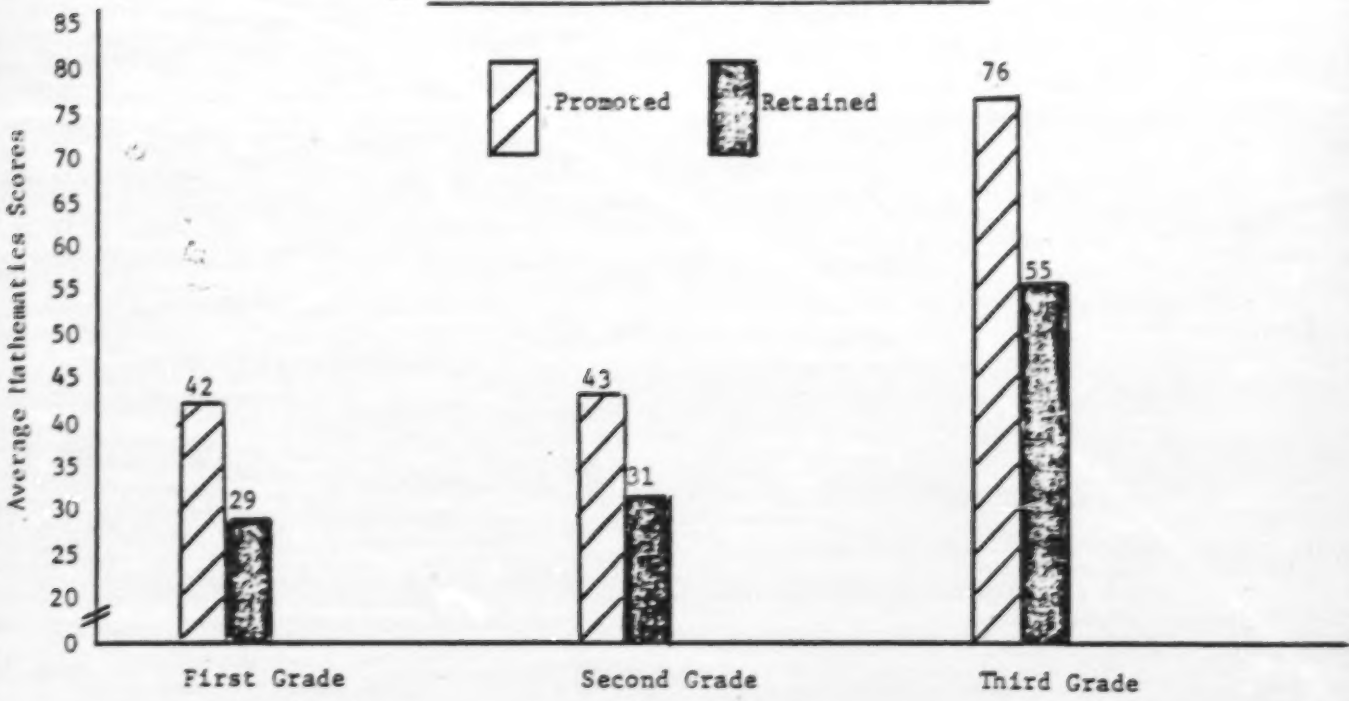
From the figures, it should be noted that:

- For both reading and mathematics, students who were promoted to a higher grade level according to the traditional definition of promotion obtained an average score which was higher than the average score for students who were not promoted to a higher grade. The difference between the scores of those who were promoted and those who were not is statistically significant in all cases (Figures 5 and 6).

- The CTBS tests are quite different in content and maximum possible score from one grade to the next and therefore, any comparison in the total scores between grades is inappropriate without additional interpretation.

Figure 6

Average Total Mathematics Scores for Students Classified According to Traditional Annual Promotion/Retention



Using data from Figures 3 through 6, summary comparisons are given for the average total reading scores (Table 8) and mathematics scores (Table 9) for the first, second, and third graders in the sample who were promoted or retained according to the promotion/retention classifications.

Table 8

Average Total Reading Scores According to Promotion/Retention Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion/Retention	Promoted	64	60	56
	Transitional	46	35	36
	Retained	36	29	29
Traditional Annual Promotion/Retention	Promoted	67	62	57
	Retained	41	36	34

The results indicate only a slight variation in the total average reading and mathematics scores of students at each grade who were classified as promoted according to the possible definitions of promotion. Similarly, at each grade, the scores for students who are classified as retained according to the definitions also differ slightly. However, it should be noted that at each grade level and for both reading and mathematics, the students designated as promoted under the traditional annual promotion/retention classification obtained the highest scores.

Table 9

Average Total Mathematics Scores According to Promotion/Retention Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion/Retention	Promoted	41	42	75
	Transitional	30	31	58
	Retained	25	27	46
Traditional Annual Promotion/Retention	Promoted	42	43	76
	Retained	29	31	55

To summarize the responses to the question:

- At all three grade levels and for both reading and mathematics, students who were promoted consistently earned significantly higher scores than those who were not promoted.
- At each grade level and for both reading and mathematics, the students designated as promoted under the traditional annual promotion/retention classification obtained the highest scores.
- As expected, students at all grades who were placed in transitional classes earned higher mathematics and reading scores than students who were retained.

B. Relationship Between Achievement, Sex, and Promotion Status

Is there a difference in reading and mathematics achievement between boys promoted and girls promoted or boys retained and girls retained?

Findings. Comparisons are presented for the average scores in reading (Table 10) and mathematics (Table 11) which were obtained by boys and girls in grades 1, 2, and 3 who were promoted in accordance with the different definitions of promotion. An asterisk (*) indicates those scores which differ significantly between boys and girls.

Table 10

Average Total Reading Scores for Boys and Girls Promoted in Grades 1 through 3 According to Promotion Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion	Boys	61	57	56
	Girls	68*	61	56
Traditional Annual Promotion	Boys	65	61	57
	Girls	69	63	57

The data presented in Tables 10 and 11 indicate that:

- Each instance of a score difference between boys and girls who were promoted showed that girls obtained higher average scores in both reading and mathematics. However, only in grade 1 reading under SPP promotion did the girls obtain scores which were statistically higher than the scores obtained by boys (Table 10).
- The mathematics scores of boys and girls who were promoted are more evenly matched than are the reading scores.
- The reading scores obtained by boys and girls who were promoted are more evenly matched at grade three than at grades one and two (Table 10).

Table 11

Average Total Mathematics Scores for Boys and Girls Promoted in Grades 1 through 3 According to Promotion Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion	Boys	40	41	75
	Girls	41	42	75
Traditional Annual Promotion	Boys	42	43	75
	Girls	42	43	76

Comparisons are presented for the average scores in reading (Table 12) and mathematics (Table 13) which were obtained by boys and girls in grades 1, 2, and 3 who were retained, that is, not promoted to the next higher SPP level or annual grade.

Table 12

Average Total Reading Scores for Boys and Girls Retained in Grades 1 through 3 According to Retention Classifications

Retention Status Classification		Grades 1	2	3
SPP Retention	Boys	33	29	28
	Girls	39	29	30
Traditional Annual Retention	Boys	40	34	33
	Girls	44	38	36

- With one exception in reading (Grade 2) and one exception in mathematics (Grade 1), girls who were retained obtained higher scores than boys who were retained. However, none of the score differences was statistically significant.

- The average scores of boys and girls who were retained are more closely matched in mathematics than in reading. In reading, they are more closely matched in grades 2 and 3 than at grade 1.

Table 13

Average Total Mathematics Scores for Boys and Girls Retained in Grades 1 through 3 According to Retention Classifications

Retention Status Classification		Grades 1	2	3
SPP Retention	Boys	26	26	45
	Girls	24	29	48
Traditional Annual Retention	Boys	28	31	53
	Girls	29	32	56

To summarize the responses to the question:

- Girls who were promoted tended to obtain slightly higher average scores than boys who were promoted, regardless of the subject, grade level, or promotion criteria. Although the scores are higher for girls than for boys, only in grade 1 reading under SPP promotion are their scores significantly higher (Table 10).

- Girls who were retained tended to obtain slightly higher average scores than boys who were retained regardless of the subject, grade level, or criteria for retention. However, none of the comparisons revealed statistically significant differences in reading or mathematics scores between the boys and girls.

C. Relationship Between Achievement, Title I, and Promotion Status

Is there a difference in reading and mathematics achievement between Title I and Non-Title I students who were promoted or retained?

Findings. Comparisons are presented for the average scores in reading (Table 14) and mathematics (Table 15) which were obtained for Title I and Non-Title I students who were promoted in accordance with the different definitions of promotion. An asterisk (*) indicates those scores which differ significantly between Title I and Non-Title I students.

Table 14

Average Total Reading Scores for Title I and Non-Title I Students Promoted According to Promotion Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion	Title I	47	50	47
	Non-Title I	68*	61	58
Traditional Annual Promotion	Title I	52	53	50
	Non-Title I	70*	63	58

The data presented in Tables 14 and 15 indicate that:

- Non-Title I students who were promoted consistently earned higher average scores in reading and mathematics than Title I students who were promoted, regardless of the type of promotion classification or grade level.
- At grade 1, the scores obtained by Non-Title I students who were promoted were significantly higher in both reading and mathematics than the scores obtained by Title I students who were promoted. Both the SPP promotion and traditional promotion report significant differences.
- At grade 3, scores obtained by Non-Title I students who were promoted were significantly higher in mathematics than the scores obtained by Title I students who were promoted. Both the SPP promotion and traditional promotion report significant differences.

- At all three grades, the highest scores for both reading and mathematics were obtained by students who were promoted to the next higher grade according to the traditional annual promotion classification.

Table 15

Average Total Mathematics Scores for Title I and Non-Title I Students Promoted According to Promotion Classifications

Promotional Status Classification		Grades 1	2	3
SPP Promotion	Title I	34	37	65
	Non-Title I	42*	42	77*
Traditional Annual Promotion	Title I	37	38	66
	Non-Title I	43*	43	77*

Comparisons of the reading (Table 16) and mathematics (Table 17) scores of Title I and Non-Title I students who were not promoted according to the promotion/retention classifications were obtained. An asterisk (*) indicates a significant difference between a set of scores.

Table 16

Average Total Reading Scores for Title I and Non-Title I Students Retained According to Retention Classifications

Retention Status Classification		Grades 1	2	3
SPP Retention	Title I	34	28	27
	Non-Title I	37	30	29
Traditional Annual Retention	Title I	37	31	32
	Non-Title I	43	38	35

Data from these tables indicate that:

- Non-Title I students in grades one and two who were retained obtained higher scores in both reading and mathematics than Title I students who were retained. However, the differences in scores were not statistically significant.

Table 17

Average Total Mathematics Scores for Title I and Non-Title I Students Retained According to Retention Classifications

Retention Status Classification		Grades 1	2	3
SPP Retention	Title I	23	27	52
	Non-Title I	26	27	45
Traditional Annual Retention	Title I	27	30	57
	Non-Title I	30	32	54

D. Achievement and Operation Rescue

Did students who were enrolled in schools with an Operation Rescue Program achieve at a higher level in reading and mathematics than students not enrolled in Operation Rescue schools?

Table 18 presents a comparison of the average scores in reading and mathematics obtained by students who were enrolled and not enrolled in Operation Rescue schools. The students used in this comparison were retained at the end of the first semester because they had not mastered specific reading and mathematics skills. An asterisk (*) indicates that the differences

between the scores for Operation Rescue students and Non-Operation Rescue students are statistically significant. The data presented in the Table indicate that:

- In general, students who did not master specific skills in reading and mathematics during the first semester but who were enrolled in Operation Rescue schools obtained higher scores in reading and mathematics than such students enrolled in Non-Operation Rescue schools.
- Only at the first grade level were the reading and mathematics scores for students enrolled in Operation Rescue significantly higher than the scores obtained by students enrolled in Non-Operation Rescue schools.
- The reading and mathematics scores of students enrolled in Operation Rescue schools and students not enrolled in these schools are evenly matched at grade three.

Table 18

Average Scores in Reading and Mathematics Obtained by Students Enrolled in Operation Rescue Schools and Non-Operation Rescue Schools

Test Area		Grades 1	2	3
Reading	Operation Rescue Program	39	35	30
	Non-Operation Rescue Program	34*	28	30
Mathematics	Operation Rescue Program	27	31	49
	Non-Operation Rescue Program	23*	26	49

E. Promotion, Achievement, and Operation Rescue

Was the mathematics and reading achievement of students in Operation Rescue schools who were promoted higher than the achievement of students who were promoted and enrolled in Non-Operation Rescue schools?

Table 19 presents a comparison of the average scores in reading and mathematics obtained by promoted students who were enrolled in Operation Rescue schools and Non-Operation schools. An asterisk (*) indicates a significant difference in the scores obtained by students enrolled and not enrolled in Operation Rescue schools. The students used in this comparison were retained at the end of the first semester because they had not mastered specific skills in reading and mathematics.

Table 19

Average Scores in Reading and Mathematics Obtained by Promoted Students who Attended Operation Rescue Schools and Non-Operation Rescue Schools

Test Area		Grades 1	2	3
Reading	Operation Rescue Program	47	45	33
	Non-Operation Rescue Program	35*	42	53
Mathematics	Operation Rescue Program	33	33	62
	Non-Operation Rescue Program	23*	26	64

The data which is presented in the Table indicate that:

- At grades 1 and 2, students who were promoted and enrolled in Operation Rescue schools obtained higher scores in reading and mathematics than students who were promoted but enrolled in Non-Operation Rescue schools.
- Only at grade one were both the reading and mathematics scores of students who were promoted and enrolled in Operation Rescue schools significantly higher than the scores of students who were promoted but enrolled in Non-Operation Rescue schools.

- At grade three, the reading and mathematics scores of the students who were promoted and enrolled in Non-Operation Rescue schools were higher than the scores of the students who were promoted and enrolled in schools with the Operation Rescue Program.

F. Achievement, Operation Rescue, and Title I

Did Title I students who attended schools with the Operation Rescue Program achieve at a higher level in reading and mathematics than the Title I students attending Non-Operation Rescue schools?

Table 20 presents a comparison of the average scores in reading and mathematics for Title I students who were enrolled in Operation Rescue schools and in Non-Operation Rescue schools. The students used in this comparison were retained at the end of the first semester because they had not mastered specific skills in reading and mathematics. An asterisk (*) indicates a significant difference in the scores obtained by students enrolled and not enrolled in the program.

Table 20

Average Scores in Reading and Mathematics Obtained by Title I Students Enrolled in Operation Rescue Schools and Non-Operation Rescue Schools

Test Area		Grades 1	2	3
Reading	Operation Rescue Program	38	32	29
	Non-Operation Rescue Program	30	26	25
Mathematics	Operation Rescue Program	28	32	57
	Non-Operation Rescue Program	22	26	49

The data which is presented in the Table indicate that:

- Title I students who were enrolled in Operation Rescue schools tended to obtain higher scores in both reading and mathematics than Title I students enrolled in Non-Operation Rescue schools. The differences, however, are not statistically significant.

To summarize the results obtained from questions which related to the Operation Rescue Program (Sections D, E, and F), it was observed that:

- In general, students who attended Operation Rescue schools tended to obtain higher scores in both reading and mathematics than those students who attended Non-Operation Rescue schools. However, only at the first grade were the scores significantly higher.

- In grades 1 and 2, specific students who were promoted to a higher SPP grade level at the end of the second semester (Spring 1981) and attended Operation Rescue schools obtained higher reading and mathematics scores than students who attended Non-Operation Rescue schools.

- Title I students who were enrolled in Operation Rescue schools tended to obtain higher scores in both reading and mathematics than Title I students enrolled in Non-Operation Rescue schools. The differences, however, are not statistically significant.

CHAPTER IV

SEX DIFFERENCES IN ACHIEVEMENT AND PROMOTION

A. The Research

The promotion and retention results of the Student Progress Plan have indicated that a significantly greater proportion of boys was placed in transitional classes deficient in reading. A slightly higher, though not significantly higher, proportion of girls was placed in transitional classes in mathematics, and a significantly greater proportion of girls was promoted in all grades. This phenomenon is not unique to SPP.

Data from the literature on elementary school nonpromotion indicate that boys suffer more retentions than girls. "Fewer boys than girls use reading as a golden key to education", states Jo M. Stanchfield,(9) professor of education at Occidental College. The following excerpts are taken from her study of sex differences in learning to read:

> "Because the poor reading achievement of many elementary school boys has been of growing concern to educators, there have been many studies designed to investigate this disparity in the reading ability of boys and girls. As early as the 1930's, St. John (8) tested approximately 1000 students in grades one through four and found no significant differences in measured intelligence between boys and girls. Nevertheless he reported that girls markedly excelled boys in reading in the first four grades, and that boys showed 75% more nonpromotions than girls."
>
> "In 1939, Wilson, Burke and Fleming (12) reported on a three-year study of sex differences in reading among students in a progressive New York City School. They found no differences in mental tests among boys and girls in the first grade; yet in reading at the second grade level, they discovered an average chance of eighty-eight in 100 that girls would be superior."
>
> "During the 1940's, one of the largest research projects on sex differences in school achievement was conducted by Stroud and Lindquist (10) with 50,000 pupils in more than 300 schools in Iowa. Students in grades three through eight were tested on reading comprehension, vocabulary, word-study skills, basic language skills and arithmetic skills. The researchers found that the girls maintained a consistent and generally significant superiority over boys in all subjects except arithmetic."

"Gates (3) was one of the first to question whether or not there might be something in the school situation or social setting which militated against the reading success of boys. In 1961, he analyzed the reading test scores of 6,646 boys and 6,468 girls in grades two through eight in New York City schools. The boys and girls were approximately typical in intelligence, scholastic appitude and other pertinent characteristics. Results of the study showed that the scores of the girls were significantly higher than those of the boys at all grade levels. Gates felt that the poorer showing by the boys on the tests indicated an enviornmental rather than a hereditary explanation. Perhaps more girls than boys experienced life situations in which there were greater opportunities, incentives and respect for reading. Because of different role conceptions in our culture, the boys might have failed to be motivated by a feeling of the importance of reading. Perhaps, too, they were less interested than girls in the school routines and the materials of instruction used for teaching reading."

"In the same vein, Powell (6) in 1967 reported that boys in in our society are taught to view feminine pursuits with disdain and many boys perceive reading as a feminine activity. Then reading becomes inappropriate for them. Powell observed that our cultural heritage encourages boys to seek out roles which exemplify the "All-American Boy" roles that emphasize the athlete rather than the reader in the idealized mode."

A study by Safer (7) compared promotion and nonpromotion by sex in elementary schools from each of three different economic regions (high, middle and low) over an eight-year span. He found that: the average frequency of nonpromotion was three times greater in the lowest economic schools as opposed to the highest economic schools; by far, more boys than girls were retained at each economic level; and the male - female nonpromotion ratio remained uniform throughout.

A research study by Landsberger (5) concluded that: boys and girls have an even start at school entrance, but boys' performance and adjustment decline relative to girls' by the end of third grade; boys do not attach them selves to school and school tasks with positive affect as much as girls; and thus, the factors related to achievement at the end of third grade are different for the sexes.

A research study by Henderson (4) in 1971 which included blacks and whites, male and females showed a higher failure rate for boys than for girls.

In 1971 Ellis (1) completed an experimental study wherein junior high classes were same-sex organized at the seventh and eighth grade levels in the areas of science, mathematics, social studies and English. The students spent approximately five-sixths of the school day for one school year in this organizational pattern. The study sought to determine the effect of same-sex class organization on junior high school boys and girls' academic achievement, self-discipline, self-concept, sex role identification and attitude toward school. Findings failed to yield significant differences between the boys and girls attributable to same sex grouping, however, girls tended to have: received higher marks from teachers; achieved higher scores on achievement tests; reported more favorable attitudes toward social groups and institutions; and responded more negatively to the sex-segregated school experience than did boys. These findings generally were consistent with the literature about early adolescents.

Waetjen (11) concluded that even casual observation in most classrooms bring to light the fact that there is a forgotten individual difference that affects learning. The difference is sex. If we assume that learning is the same for all, regardless of sex differences, then how do we explain: that there are two to three times as many boys who underachieve in school as there are girls; that there are four times as many boys who are poor readers or nonreaders as girls; and why eighty-five percent of the children in the hands of youth authorities are boys? Waetjen concluded that these figures did not indicate that boys are inferior, but more probably suggest that school learning of boys is less efficient or at least different from that of girls.

Felsenthal (2) also concluded that one individual difference in school learning is the sex difference. There is ample evidence that boys have a significantly higher proportion of learning and behavior disorders than girls. Nearly two-thirds of all grade repeaters are boys. While investigators do not agree if boys and girls are equally ready to read, most studies comparing girls and boys on measured reading achievment indicate greater achievement by girls.

The research is quite conclusive that girls outperform boys academically in the early years of school. What is the reason? How do we explain the sex differential in learning? The literature is not conclusive on the answers to these questions. Various reasons have been advanced. Some reasons cited in the literature follow.

° Physiological factors

- Among school-age children, boys tend to be biophysically less mature than girls of the same chronological age.
- Boys have a higher metabolic rate than girls, which might account for the familiar sex differences in overt behavior.
- The learning of the sexes is the result of biological fact.
- Girls verbalize earlier and more than boys.

° Psychological factors

- Girls are more sensitive to human relationships than boys.
- Girls have more positive reactions to situations that children experience directly (church and school).
- Girls perceive themselves as being more accepted and valued by parents than boys.
- Boys are more aggressive and less conforming in the school situation.
- Boys have special interests and do not like so-called "girlish" books.
- Boys appear not to listen as intently and carefully as girls.

- Boys appear to have a lower frustrtion level for boredom than girls and to be less able to attend and tolerate the monotony of regular classroom routines.

- Girls are more eager to please the teacher, their parents, or another adult figure.

- Boys are more resistant and negative about school and education than girls and less concerned about achievement and recognition.

° Sociological factors

- The learning of the sexes is the result of social influence.

- Each of the sexes is taught from early in life to behave in sex appropriate ways.

° Teacher factors

- Girls are assigned higher grades by their teachers than boys are.

- Teaching methods and materials used are more suitable for girls' learning style.

- Boys are aware that teachers seem to prefer girls in the classroom.

- Girls receive significantly greater approval from teachers than boys.

- Almost without exception teachers report that boys are "hard to manage" in the classroom.

- Female first-grade teachers interact differently with girls than they do with boys.

- Differences in pupil reading achievement are associated with differences in teachers' attitudes and interactional behavior.

- Boys recieve significantly more disapproval or blame from teachers than girls.

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